

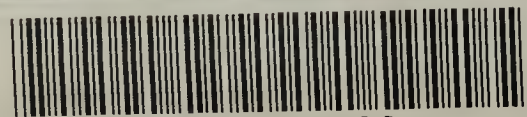


ANNUAL REPORT
OF THE
SARAWAK GOVERNMENT
MEDICAL DEPARTMENT
FOR THE YEAR
1923.

KUCHING:

PRINTED AND SOLD AT THE GOVERNMENT PRINTING OFFICE.

1924.



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Sarawak Government Medical Department.

Annual Report for 1923.

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1.—Sarawak Government Medical Department.

The opening of the year produced an alarming though small and short lived epidemic of Encephalitis Lethargica. Eight cases in all were reported, out of which number 4 died. The disease did not affect the European community. There was one relapse after a period of six months.

In other respects the general health of the country has been consistently good.

Dengue, the scourge of the previous year, merely paid a passing visit, while cases of Influenza were persistent all through the year. These were, however, of a mild nature and after a short period of malaise individuals were able to resume their duties and occupations.

A slight epidemic of measles occurred during the winter months; the school children were the chief sufferers, and a few cases were also notified from the Kampongs and Bazaars.

Five cases of Enteric fever came under our observation. Though this disease exists in a sporadic form yet it is reasonable to suppose that there is a wider incidence; native customs, faith in their own *obat* and backwardness in approaching European Doctors must certainly lead to a number of cases being unrecognised and undetected.

To the people of this country, Novarsenobillon ranks as the premier and magical medicine. The year shows a notable increase in the number of cases treated.

The following is a summary of the injections given for yaws and *muli* during the year :—

Kuching	...	...	...	...	1,180
Sibu	...	...	...	...	380
Simanggang	...	...	...	...	480
Baram	...	...	...	...	325
Miri	...	...	...	...	169
Sadong	..	...	...	..	252
Bintulu	...	...	...	...	262
Bau	...	...	...	...	91
Mukah	...	...	...	...	158
Limbang	...	...	...	...	13
Total					3,310
Previous year					2,473

It is befitting here that we should again thank Professor Harrison Smith for his laudable gift of a Fund whereby the Kayans in the Ulu Baram are now able to receive free injections for yaws. For this purpose a large sum of money has been deposited with the Sarawak Government. The Medical Department was able to avail itself of an opportunity and Dr. Reed in May visited the upper reaches of this river where he found the natives very willing to receive treatment. He was able to give 108 injections.

The following death occurred among members of the European community in Sarawak during the year :—

Miri ... adult ... diabetes.

There were seven births during the year of which two occurred at Kuching, one at Sibu, and the remainder at Miri.

2.—Staff.

The following appointments have been made during the year.

Dr. W. E. Le Gros Clark, F. R. C. S., resigned his appointment and left Kuching on the 6th of June for England to prosecute a wider and more extensive study in one of the big London Hospitals. His departure is regretted by one and all. Our good wishes follow him.

Dr. J. G. Reed, M. R. C. S., L. R. C. P., was appointed Divisional Medical Officer, 3rd Division, to date from 22nd October 1923.

Dr. E. M. Marjoribanks, L. R. C. P. & S. E., Acting Principal Medical Officer from 16th June, and Acting Registrar of Births and Deaths for Europeans in Sarawak. These appointments were confirmed at the end of the year.

Mr. Tan Sim Poh, Assistant Surgeon, was granted three months leave at the end of the year.

Dr. N. Chand proceeded to Sibu to do duty as Acting Divisional Medical Officer, pending the appointment and transfer of Dr. Reed.

The following additions were made to the Medical Subordinate Staff during 1923 :—

Sub-Assistant Surgeon	...	1
New apprentice dressers	...	6
Dresser	... ..	1
Nurses	... ..	2
Clerks	... ..	2

This increase is due to the opening of new Hospitals and Dispensaries at Baram, Miri and Limbang.

The chief item of interest is the establishment of the Medical Department on a permanent and pensionable basis. This is a happy augury for its future. Yet there is still need for further reconstruction. In accordance with the new regime the Principal Medical Officer is the only one on the permanent establishment. It is to be hoped that at a later date this privilege will be extended to the rest of the European Staff.

An interesting function at the end of the year was the marriage of Dr. E. O'Driscoll to Mr. R. Le Sueur of the Sarawak Police. Their Highness the Rajah and Ranee and a number of friends were present at the ceremony. Dr. Le Sueur fortunately remains in the Service as Pathologist. The Department has need to be pleased that it does not lose her efficient and valuable assistance.

3.—Buildings.

It is gratifying to be able to report that the proposals enumerated in the 1922 report as the construction of a new General Hospital and Lunatic Asylum have received sanction and such favourable support. This will be an incentive to the Medical Staff as well as a boon to the Asiatic community. The suitability of a site for this purpose now raises a fascinating though difficult problem. With the kind co-operation of the Superintendent of Land and Survey and the Commissioner of the Public Works Department numerous selected areas have been inspected with a view to estimating such data as acreage, drainage, levels, water supply etc. The initial difficulty is the acquisition of land a reasonable distance from the town so that easy locomotion and hygiene might conjointly contribute towards the attainment of an ideal situation.

The fate of the Grange Hospital is still undecided. A valuable addition has been the inclusion of the Annex for Eurasian patients. This however merely temporises with larger issues, for though extra ward space is a helpful factor, yet it is of minor assistance. The ideal is only to be obtained by a modernised building completely equipped and fashioned after the standard of the leading Tropical Hospitals.

The Pauper Camp situated at the 10th Mile consists of three leaf *atap* houses each divided into cubicles. It lies in a valley. Complaints are frequent, for during the rainy season the surrounding locality becomes waterlogged and these temporary hutments are scarcely proof against the torrential rains. Moreover they are constantly in need of repairs.

The land overlooking the Camp affords an excellent building site. In view of the permanency of this settlement it will be both hygienic and beneficent if houses with masonry foundation are erected.

4.—European Hospital & Annex.

During the year 31 patients were admitted, one remaining at the end of the year.

The following is a list of admissions :—

Influenza	...	...	...	3
Fractured leg	...	...	...	1
Appendicitis*	...	...	...	1
Myocarditis	...	...	...	1
Confinements	...	...	...	2
Broncho-Pneumonia	...	...	...	1
Pyorrhoea	...	...	...	5
Cystitis	...	...	...	1
Albuminuria	...	...	...	1
Amoebic Dysentery	...	...	...	1
Follicular Tonsillitis	...	...	...	1
Mucous Colitis	...	...	...	2
Phlebitis	...	...	...	1
Perineal Abscess*	...	...	...	1
Dental Extractions	...	...	...	3
Neurasthenia	...	...	...	1
Phimosis*	...	...	...	1
Infant Teething	...	...	...	1
Encephalitis Lethargica	...	...	...	1
Anal fissure*	...	...	...	1

N. B.—Those cases marked * required operative treatment.

The Annex.—A building previously meant for the Matron's quarters was, towards the end of the year, opened for the reception of Eurasian patients. Accommodation is now provided for this large and increasing community.

5.—General Hospital.

A table of Comparative Statistics of the General Hospital for the year 1909—1923 is given.

The death rate was larger than the previous year, on the other hand there was an increase in number of admissions. This is particularly noticeable among the Malays who are coming forward more willingly for treatment.

In the female section the number of patients is comparatively small. The lack of adequate accommodation and the unavoidable necessity of housing together all classes, races, and creeds are influential factors in keeping the women folk away. Fortunately new buildings schemes are soon to be realised and it is hoped that the coming era will be productive of better results.

Phthisis.—There is little that can be done for the type of cases that come under our observation. They seldom present themselves for treatment until either alarming haemoptyses or advanced emaciation and weakness force them to seek alleviation. Again the bulk of them have been opium smokers, and some still are. They are given a special dietary, and open air treatment is carried out on the usual lines. A few cases have shown marked improvement with Sodium Morrhuate and Tuberculin Injections. The disease is rampant in the city, the bazaars being chiefly responsible for its incidence and spread. Over crowding is common in many houses, and the principles of ventilation and general sanitation are entirely disregarded. It is therefore not surprising that the disease is gaining ground.

Beri-beri.—Admissions occur on an average of 2·5 per month. The results of treatment on dietetic lines have been most favourable. As often as possible samples of rice are called for from the patients' houses or from the estate or factory in which they are employed. The specimens were practically always highly over milled. A consistent standardisation of the supply purveyed by the rice marchants would be of valuable assistance.

Malaria.—The number of cases of malaria was comparatively small. The majority came from Satang Island; a few developed cerebral symptoms. Treatment was administered by the intramuscular and intravenous methods. Two fatalities occurred soon after admission; they were in an extreme toxic condition. The remarkable diminution in the size of the enlarged spleens after injections of Novarsenobillon was worthy of note.

The Electric lighting was installed by the end of June, to the great satisfaction of both patients and Staff. No new construction work was attempted during the year. The usual repairs, whitewashing, and painting were carried out. The Hospital has now its own guards and gardeners. Formerly these employees were borrowed from the Police and Public works Departments. It was found that irregularities and misunderstandings as to times and duties were not infrequent. Further a condition of dual control appeared to exist. It was therefore considered advisable that these men should belong solely and entirely to the Medical Department. The number of Sikh guards have been increased to 9; some of them are old soldiers. They reside in a barrack in the grounds and their duties consist of patrolling and policing the European as well as the General Hospitals. A variety of new surgical instruments and appliances have been received during the year. This addition to our stock is most welcome and helpful. The Hospital is however greatly in need of two essentials:—

- (1) *An Eye Department*.—The amount of ophthalmoscopic work is sufficiently large to justify a specially equipped section being devoted to this purpose.
- (2) An XRay Apparatus is necessary for both diagnostic and therapeutic reasons. Without this valuable asset the opportunity for accurate investigation is considerably restricted.

RETURNS FOR THE YEAR ENDING DECEMBER 31st, 1923.

Returns for the year ending December 31st, 1923.

Number of patients remaining in Hospital January 1st, 1923	...	118
„ „ „ admitted during the year	...	1,048
		<u>1,166</u>

Discharged Cured or Relieved.	Absconded.	Died.	Remaining.	Total.
886	91	100	89	1,166

Mortality per cent of total cases treated 8·57.

Tables showing headings under which patients were admitted during the year.

Charity account	...	646
Government account	...	480
Private account	...	40
		<u>1,166</u>

NATIONALITY OF PATIENTS TREATED.

Chinese	...	...	...	671
Sea Dyak	...	...	...	89
Land Dyak	...	...	...	125
Tamil	...	...	...	132
Malay	...	...	...	93
Sikh	...	...	...	20
Sepoy	...	...	...	15
Eurasian	...	...	...	3
Kayan	...	...	...	5
Javanese	...	...	...	8
Milano	...	...	...	2
Boyan	...	...	...	1
Bundu	...	...	...	1
Japanese	...	...	...	1
				1,166

DAILY SICK AVERAGE.

Daily sick average for year ... 110.40.

DAILY SICK AVERAGE PER MONTH.

January	...	...	...	117.06
February	...	...	...	121.03
March	...	...	...	108.48
April	...	...	...	110.26
May	..	...	...	95.22
June	...	...	...	113.26
July	...	...	...	109.29
August	...	...	...	110.96
September	...	..	...	107.63
October	...	...	...	112.38
November	...	...	...	120.10
December	...	...	...	121.19

Largest number in Hospital on any one day February 6th ... 131

Smallest „ „ „ „ „ „ „ „ May 10th ... 83

DYSENTERY RETURN.

Remaining 31/12/23.	Admitted during the year.		Developed in Hospital.		Total.
4	33		22		59
Cured or Relieved.	Absconded.	Died of Dysentery.	Died of other affection.	Remaining.	Total.
37	2	7	4	9	59
Mortality per cent			...	...	11.85

BERI-BERI RETURN.

Remaining 31/12/23.	Admitted during the year.		Developed in Hospital.		Total.
3	30		nil.		33
Cured or Relieved.	Absconded.	Died of Beri-Beri.	Died of other affection.	Remaining.	Total.
22	3	2	nil.	6	33
Mortality per cent			...	...	6.24

TABLE OF DISEASES.

The diseases worthy of note occurred as follows :—

Ankylostomiasis	...	...	...	69
Ascariasis	...	...	...	4
Amoebiasis	...	...	...	1
Balantidium coli infection	...	...	...	1
Cholelithiasis	...	...	...	1
Cirrhosis of liver	...	...	..	2
Carcinoma of rectum	...	...	...	2
„ „ stomach	...	...	...	3
„ „ duodenum	...	...	...	1
„ „ pylorus	...	...	...	1
„ „ uterus	...	...	...	1
„ „ penis	...	...	...	2
Dysentery, Amoebic	...	...	...	36
„ Bacillary	...	...	...	1
Duodenal Ulcer	...	..	...	3

Epithelioma of rectum	...	...	1
Fistula in Ano	...	...	1
Gastric Ulcer	...	...	4
Hernia, inguinal	...	...	3
Hernia, inguinal strangulated	...	...	1
Haemorrhoids	...	...	3
Ischio-rectal Abscess	...	...	3
Liver Abscess	...	...	4
Peritonitis	...	...	1
Prolapsed rectum	...	...	2
Carcinoma (of liver)	...	...	1
Psoas Abscess	...	...	2
Tubercular disease of joints	...	...	10
Aneurism, Abdominal aorta	...	...	2
Endocarditis	...	...	7
Myocarditis	...	...	5
Pericarditis	...	...	1
Senile Cataract	...	...	1
Congenital „	...	...	1
Glaucoma	...	...	1
Iritis	...	...	1
Diabetes	...	...	5
Malaria	...	...	63
Rheumatism	...	...	7
Spleno-medullary leukemia	...	...	1
Abortion, incomplete	...	...	1
Cystitis	...	...	2
Bilateral ovarian cysts	...	...	1
Obstructed labour, (impacted shoulder)	...	...	1
Epithelioma of urethra (female)	...	...	2
Hydrocele	...	...	5
Nephritis acute	...	...	8
„ chronic	...	...	2
Nephroptosis	...	...	2
Pregnancy	...	...	2
Renal Calculus	...	...	4
Ruptured Uterus	...	...	1
Uterine fibroid	...	...	1
„ tumour	...	...	1
Tubercular testis	...	...	1
Vesico-vaginal fistula	...	...	1
Vesical Calculus	...	...	4
Dislocations	...	...	3
Fractures	...	...	11
Ruptured Spleen	...	...	1
Erythema Nodosum	...	...	1
Elephantiasis	...	...	8
Goitre	...	...	4
Lymphangitis	...	...	5
Alcoholism	...	...	3
Tuba poison	...	...	1
Beri-beri	...	...	33
Dementia	...	...	6
Delusional insanity	...	...	7
Epilepsy	...	...	6
Encephalitis lethargica	...	...	4
Hemiplegia	...	...	9
Paraplegia	...	...	2
Intracranial tumour	...	...	1
Leprosy	...	...	9
Locomotor ataxia	...	...	3
Malaria, Cerebral	...	...	2
Melancholia	...	...	7
Mania	...	...	21
Transverse myelitis	...	...	4
Tetanus	...	...	1
Asthma	...	...	9
Abscess of lung	...	...	2
Phthisis	...	...	49
Pyopneumothorax	...	...	1
Pneumonia	...	...	24
Pleurisy	...	...	6
Dengue fever	...	...	1
Influenza	...	...	26
Typhoid	...	...	5
Ulcerating granuloma	...	...	2
Scabies	...	...	17
Tinea Imbricata	...	...	11
Yaws	...	...	46
Gonorrhoeal urethritis	...	...	32
„ complications	...	...	32
Syphilis	...	...	28

Causes of Death : —

Ankylostomiasis	...	...	6
Abscess of lung	...	...	1
Abscess of liver and lung	...	...	1
Beri-Beri	...	...	2
Biliary obstruction	...	...	2
Exhaustion following acute mania	...	...	2
Cerebral Malaria	...	...	2
Carcinoma, duodenum	...	...	1
„ stomach	...	...	1
„ uterus	...	...	1
Cirrhosis of liver	...	...	1
Diabetes Mellitus	...	...	1
Dysentery, amoebic	...	...	4
„ bacillary	...	...	5
Oesophagectomy	.	...	1
Epilepsy	...	...	1
Exhaustion following paraplegia	...	...	1
Encephalitis lethargica	...	...	3
Endocarditis	...	...	3
Septicaemia	...	...	1
Peritonitis following perforated gastric ulcer	...	...	1
Hemiplegia	...	...	1
Tabes mesenterica	...	...	1
Liver abscess	...	...	1
Dysentery superadded to Locomotor ataxia	...	...	1
Myocarditis	...	...	2
Dysentery superadded to acute mania	...	...	1
Nephritis	...	...	3
Obstructed labour and shock	...	...	1
Phthisis	...	...	28
Pneumonia (Heart failure)	..	...	5
Pericarditis & Empyema	...	...	1
Paraplegia & Cystitis	...	...	1
Psoas abscess and Dysentery	...	...	1
Pyonephrosis	...	...	1
Pyopneumothorax	...	...	1
Retro-peritoneal haemorrhage, traumatic	...	...	1
Internal haemorrhage, ruptured spleen	...	...	1
Ruptured uterus	...	...	1
Peritonitis following strangulated hernia	...	...	1
Carcinoma of liver	...	...	1
Typhoid fever	...	...	1
Tetanus	...	...	1
Transverse myelitis	...	...	1
Toxemia due to extensive cellulitis	...	...	1

Comparative Statistics of General Hospital for year 1909-1923.

Year.	Total No. of Cases,	RACES.			Average Daily Sick.	General Mortality %.	PHTHISIS.			BERI-BERI.			DYSENTERY.			Operations performed.	REMARKS.
		Chinese.	Dyak.	Malay.			Total No.	Death.	Mortality %.	Total No.	Death.	Mortality %.	Total No.	Death.	Mortality %.		
1909	1,151	662	170	39	152	13.7	—	—	—	309	60	19.4	159	33	27.0	153	
1910	1,035	659	107	42	120	11.0	62	23	37.1	225	30	13.3	64	18	28.1	165	(1) Includes about sixty
1911	1,049	611	155	29	124	12.3	60	32	53.3	181	24	13.3	72	16	22.2	169	without general anaesthetic.
1912	856	479	171	46	87	9.7	40	17	42.5	71	12	16.9	41	14	34.1	151	(2) Includes 49 without
1913	906	594	109	46	96	12.7	48	21	43.8	125	11	8.8	51	13	25.5	124	general anaesthetic.
1914	947	653	75	47	120	11.9	39	21	53.8	127	11	8.7	53	16	30.2	116	(3) 22 Cases developed in
1915	782	517	114	22	89	13.0	47	26	55.3	74	8	10.8	39	11	28.2	58	Hospital.
1916	760	538	117	43	72	9.3	31	19	61.3	77	—	—	11	2	18.2	62	
1917	919	629	148	40	98	14.6	31	24	77.4	134	18	13.4	28	11	39.3	102	
1918	891	581	124	52	96	12.8	50	28	56.0	56	5	8.9	33	9	27.3	56	
1919	—	—	—	—	—	No Annual Report issued.	—	—	—	—	—	—	—	—	—	—	Only deaths due to the
1920	1,005	682	131	50	84	7.3	36	19	52.8	18	3	16.7	20	4	20.0	77	actual disease mentioned,
1921	1,163	792	179	65	84	8.3	55	26	47.3	20	2	10.0	26	6	23.1	248	without the supervision of
1922	964	591	170	68	80	6.9	39	18	46.2	13	1	7.7	43	5	11.6	287 ¹	other disease, are included in
1923	1,166	671	214	93	110	8.57	49	28	57.0	33	2	6.24	59 ³	7	11.85	246 ²	the percentage lists.

6.—St. Theresa's Convent.

Kuching, April 1st, 1924.

It is now two years since our small Hospital for native children was opened by the Mission.

The number of children treated is steadily increasing. During the first twelve months seventy-two patients were admitted into the Hospital, but during the last twelve months two hundred and four In-patients have been admitted an increase of one hundred and thirty-two, and five thousand three hundred and seventy-nine Out-patients have received treatment. Of these cases the In-patients are chiefly very young infants generally brought to us in a dying condition after all sorts of native remedies have been tried, the result being forty-four deaths in the year. Some of these little sufferers lived only a few hours after admittance, while in one or two cases the child was actually dead when brought in. In these circumstances the death rate is bound to be high, but as time goes on, we hope that the Native Mothers will try our Hospital as a first resort, instead of a last one, when their babies are taken ill.

The upkeep of the Hospital has added considerably to the expenses of the Mission, but His Highness the Rajah after visiting it during the past year has kindly allowed us a Government Grant of twenty-five dollars a month towards the expenses.

The Medical Department also gave us a great deal of invaluable help, allowing us many of our drugs free of charge, and Dr. Le Sueur, one of the Medical Officers, kindly acts as Honorary Physician to the little patients.

JESSIE HARVEY,
(*Matron.*)

7.—Pathological Department.

KUCHING, SARAWAK, 1923.

*The Principal Medical Officer,
Kuching.*

SIR,

I have the honour to submit report on work done in Pathological Department during year ending 31st December, 1923.

The Laboratory premises were increased to twice the original size when the Principal Medical Officer vacated his old Office in May, 1923. This increase in size has greatly facilitated our work, and was badly needed. A quantity of new material has been obtained from London and locally. This includes a quantity of strains, re-agents, two microscopes and an electric centrifuge. The Laboratory is now supplied with Electricity used for lighting and motive power. Some more appliances *re* Bacteriological work were sent from London, but were unsuitable and returned. The Outstation microscopes were returned for inspection, from Sadong, Sibu, Simanggang and Barau. In one case the microscope screws had rusted through and none of the microscopes was properly equipped and cared for. In future a microscope will be issued only to a dresser who has proved himself capable of using it.

Lectures to the dressers have been given in Pathology and Laboratory work; when convenient a dresser has been appointed to work in the Laboratory. It was not possible to allow all dressers to the Laboratory, owing to the shortage in numbers and absence of some at Outstations. I find the junior men prove better at the work both in aptitude and keenness to learn. I hope in the near future it will be made compulsory for a dresser at the end of his first or second year to pass an examination showing his proficiency in microscope work. A man having passed such an examination who is equipped with microscope at an Outstation would receive an allowance of say \$10 a month. A knowledge of microscope work is essential to diagnosis of most diseases in this country, but I find that an amateur can do more harm than good. Again stains and re-agents are expensive items and only to be trusted to a competent man.

A complete Laboratory outfit was supplied to Sibu Station under care of Dr. Reed in September. A microscope and stains for emergency work is kept at the General Hospital.

The Laboratory Assistant P. Uzaraga has been an excellent worker during the year. He passed a very satisfactory examination in May, and has proved himself capable of doing the routine work in the Laboratory. During this year, he will sit for an examination of higher standard in accordance with the new appliances which have been obtained. I hope a junior Laboratory assistant may be available for a period of 3 or 6 months at a time.

During this year Wasserman Reactions and more elaborate Bacteriology will be added to the routine work.

The Sarawak Rangers and families stationed at the Fort in the latter part of the year were examined *re* Intestinal Helminthic Infection. We found 40% infected with Hookworm and 70% with Roundworm. The abolition of this infection in a well organised dépôt such as the Fort ought to be an easy matter. Examination of the Police stationed in Kuching showed Hookworm infection 24½% and Roundworm infection 47%. A number of the Police have received worm treatment already, which accounts for the low estimate of infection. I suggest the advisability of examining all recruits *re* infections with worms before allowing them to enlist in either Force. The School girls at the R. C. Mission were examined for and treated for worm infections. The boys of this and S. P. G. Mission were examined the year previously. I understand that in future the work of this nature will to a large measure be undertaken by the Public Health Department.

	Faeces. Examina- tions.	Hook- worm.	Round worm.	Entamoeba Histolytica.
Routine Laboratory work ...	2,160	46 %	52 %	45 cases.
Sarawak Rangers and families ..	271	40 %	70 %	...
Sarawak Police ...	144	24 ½ %	47 %	...
Convent Girls and Hospital ...	98	38 %	88 %	...
Sadong Miners ...	508	...	...	...
Surface Workers ...	...	100 %	70 ½ %	..
Underground Workers ..	...	97 %	26 ½ %	...
Brooketon Mines ...	50	100 %	80 %	...

In addition there are found :—

Adults and Ova of <i>Oxyuris vermicularis</i>	...	...	6 Cases
,, , <i>Hymenolepis nana</i> ...	...	...	5 ,,
,, , <i>Clonorchis sinensis</i> ...	...	...	3 ,,
,, , <i>Balantidium coli</i> ...	...	...	1 Case

Numerous cases of infection with *Girdardia intestinalis* and *Trichomonas hominis*.

Infections with *Tricocephalus dispar* and *Strongyloides stercoralis* are numerous but are not considered pathognomic and are ignored.

		Positive for B. typhosus.	Negative for <i>B. para</i> <i>typhosus a</i> & <i>B. para</i> <i>typhosus b</i> .
Widal Reaction ...	16	2	16
Total Corpuscle Differential Counts	18	... included one case of Splenomedullary Leukaemia.	...
Serological tests of human blood ..	2	...	...
For Microfilaria ...	1,416	Results noted below	...
For Malaria ...	673	...	...
Fluid for Poison ...	1	...	...

Malaria.—During the first six months of the year there were :—

S. T. 28, B. T. 10, Quartan 2.

From July 1st an effort was made to find where cases had been infected. The outstanding feature in the list is the large number of cases from Satang in August and September and the subsequent reduction in the numbers.

	July.	August.	Sept.	October.	November.	Dec.	TOTAL.	
Bau ...	...	{ Bt. 1 St. 3 }	Bt. 1	St. 1	Bt. 1	Bt. 1	Bt. 4	St. 4
Buso ...	...	...	...	...	Bt. 1	...	Bt. 1	...
Buntal ...	...	...	...	St. 1	...	...	...	St. 1
Batu Kawa	...	...	...	...	...	Bt. 1	Bt. 1	...
Kuching	...	Bt. 2	...	{ Bt. 1 St. 1 }	{ St. 1 St. 1 }	...	Bt. 4	St. 2
Quop ...	...	...	...	St. 1	...	...	...	St. 1
Kranji ...	...	...	St. 1	...	...	...	...	St. 1
Lawas ...	...	...	...	...	...	St. 8	...	St. 3
Miri ...	Bt. 1	St. 2	St. 1	St. 1	{ St. 2 Bt. 1 }	...	Bt. 2	St. 6
Matang	St. 3	St. 2	Bt. 1	...	St. 1	St. 1	Bt. 1	St. 7
Mile, 3rd	...	...	Bt. 1	...	Bt. 1	...	Bt. 2	...
" 5th	...	...	...	...	...	St. 1	...	St. 1
" 10th	...	...	...	...	...	St. 2	...	St. 2
Sungei China	...	...	St. 2	...	...	...	...	St. 2
Sungei Tengah	...	...	...	St. 1	...	...	...	St. 1
Simpangtiga	...	Bt. 1	...	...	...	...	Bt. 1	...
		{ St. 19 Bt. 4 Qr. 8 }	{ St. 23 Bt. 3 }	St. 14	St. 4	St. 1	Bt. 4 Qr. 8	St. 66
Satang ...	St. 5							
Simanggang	...	...	...	...	...	St. 1	...	St. 1
Rejang ...	St. 1	...	...	...	...	...	...	St. 1
Mile, 7th	...	...	...	...	...	St. 1	...	St. 1
						TOTAL.	Bt. 20 Qr. 3	St. 100

Where a double infection with Subtertian and Benign tertian occurred, it is counted under Subtertian only.

Sputa	184	Tubercle Bacilli. 20%
Urine	317	...
Stomach Analysis	6	...
Sections	64	Paraffin Sections.
		including clinical material for diagnosis and material from post-mortems.
Smears of Pus	272	Including <i>B. leprae</i> , <i>Gonococci</i> , <i>Koch weeks bacilli</i> etc. Of the smears examined <i>re gonococcus</i> 56% proved positive in first examination.
C. S. F.	14	...

In the investigation of the cases of Beri Beri which occurred, samples of Rice were sent for examination. Samples vary slightly from time to time, but all the imported Siam and Indian rice proved to be overmilled. The local Dyak and Malay rice were only partially polished.

Dysentery.—Practically all the dysentery cases proved to be due to *Entamoeba histolytica*. There were no cases of a true Bacillary Character. A few cases of Enteritis and Colitis due to the *B. tuberculosis* occurred. A type of asthenic dysentery occurred in very debilitated patients—all these cases ended fatally. Finding, on microscopic examination, combined with the appearance of the colon at autopsy indicated an old amoebic infection with a superadded sepsis; most of these cases were advanced opium smokers.

Diarrhoea cases were frequent. *Girdardia intestinalis*, free and encysted occurred in a large number of these. There were no cases of dysentery attributable to this organism. *Tricomonas hominis* also appeared in diarrhoea cases.

A large number of paraffin sections were cut both for purposes of diagnosis, and for teaching purposes. A number were sent to London School of Tropical Medicine.

One may make preliminary remarks on the presence of Filarial infection in this country. The matter has never been scientifically worked out. In the Laboratory we have examined 1,416 slides of night and day blood of Chinese, Malays, Dyaks and Tamils.

Results show an infection of Chinese and Tamils only in night blood—about 3%.

In Malays and Dyaks a non-periodic micro-filaria is present 12% day and 10% night blood.

The Dyaks of Simanggang seem to be the most heavily infected people.

Further work on this subject would be of great interest to the Medical World, but one can draw no conclusion until one has examined a large number of slides and worked out the infecting mosquito in all types of filaria.

I was at Sadong from 16th January to February 10th and investigated the incidence of Hookworm and other intestinal parasites there. I found the mine population heavily infected with both Hook and Round Worms. I visited Sadong in May and arranged for treatment and for prophylactic control against reinfection. The mine population are localised in the district around the mine and are directly under control of the Manager—(making treatment and control of the disease practical). Mass treatment with Carbon Tetrachloride and Oil of Chenopodium was given, patients being admitted for 12 hours to the mine hospital. The drug proved quite efficient and safe. Mr. Evans reports later in the year the results of treatment have been apparent in the immediate and sustained reduction in the hospital attendance by about 60%, and in the better working capacity of the men. The success of the treatment is largely due to his interest in the scheme, and his energy in supervising the provision of sanitary accommodation and prophylaxis.

I visited Brooketon in July to investigate Hookworm in the mines there. The district is heavily infected, and sanitary control non-existent. Mass treatment would doubtless be of great benefit to the workers. The matter of treatment and control lies with the Medical Officer at Labuan.

I visited Satang Island in October, the Laboratory Assistant went on two subsequent occasions, to collect specimens of blood, larvae etc. for examination.

The results of blood examination and decrease in the frequency of Malaria in the coolies are noted under the heading Malaria.

The adult mosquitoes and larvae collected were:—

Anopheles maculatus, which was the malaria carrier.

Stegomyia fasciata, *Culex fatigans*, adults and larvae were easily collected.

In the latter visits—November and December no *Anopheles* larvae were found.

I was in Singapore and F. M. S. as a delegate to the Far Eastern Congress of Tropical Medicine in August and September. I read our joint paper on “seven cases of Encephalitis lethargica”—which cases occurred in Kuching in March and April 1923.

The paper was favourably received, and an interesting discussion followed. Surgeon Smith U. S. N. (Manilla) gave a description of the Clinical aspect of Encephalitis cases which came under his care at the same period—and Professor Shellshear F. R. C. S. of Hongkong University reviewed the cases from the psychological aspect of the mental derangement which occurred in the cases.

A paper on Hookworm disease from the Department was published in the *Sarawak Gazette* of November.

A quantity of pathological material has been sent to the London School of Tropical Medicine. It is of great value to them for teaching purposes.

The Museum in the Laboratory has been added to considerably. It is now of sufficient size to need cataloguing.

Post-mortem Examinations. 83 Post-mortem examinations were done. 69 cases were of patients who died in the hospital, Chinese 65, Dyaks 4. 14 Cases were sent for autopsy by the Police Authorities. Apart from the necessity of post-mortem examinations in certain cases, they afford an invaluable aid in teaching anatomy and pathology to the dressers. In Medico-legal work certain Police cases were of considerable interest to us, and illustrate the necessity for thorough medical investigation as an aid to Police work. One case of this nature has been published in the Transactions of the Royal Society of Tropical Medicine and Hygiene. The corpse appeared to have been the victim of a murder, but proved to have died from acute Haemorrhagic Pancreatitis.

A post-mortem was done on "Friday" (pony from H. H. the Rajah's stables). He died the day following August Races. Death was due to dysentery caused by a worm *Oesophagostomum apiostomum*—Specimens of this and other worms were sent to Dr. Vevers, Director of London Zoo, for identification. Several of the ponies were subsequently examined and found suffering from a variety of worms, for which they received treatment.

POST-MORTEMS.

Lunatics			
(a) Asthenia	...	...	1
(b) Dysentery	...	..	3
Tuberculosis	...	...	20
Arterio seclerosis	...	...	8
Cerebral Haemorrhage	...	...	2
Encephalitis Lethargica	...	...	3
Empyema	...	...	1
Liver Abscess	...	...	1
Dysentery	...	...	8
Pneumonia	...	..	6
Typhoid	...	...	1
Cholecystitis	...	...	1
Cirrhosis of Liver	...	...	1
Nephritis	...	...	2
Hydronephrosis	...	...	1
Pyelitis and Cystitis	...	...	1
Ankylostomiasis	...	...	5
Drowning	...	...	1
Suicide Cut throat	...	...	1
,, Hanging	...	...	1
Senility	...	...	2
Cerebral Malaria	...	...	3
Cystitis and Peritonitis	...	..	1
Beri Beri	...	...	1
Infanticide	...	...	1
Murder, Parang Cuts 1)	...	...	2
,, Axe Cuts 1)	...	...	2
Ac. Haemorrhagic Pancreatitis	...	..	1
(T. R. S. T. M. & H.)			
Aneurism (Ruptured)	...	...	1
Septicaemia	...	...	2
Endocarditis	...	...	1
		Total	83
Police Cases	...	...	14
Hospital ,,	...	...	69
			83

I have had a considerable amount of work among women and children and took over complete charge of the women and children at the General Hospital from Dr. Reed in June. Since then the space allotted to this department and the nursing staff has increased, but there is a notable lack of accommodation for better class patients. One can easily understand their aversion to the present accommodation which was originally intended for charity patients. Considerable improvements have been made, and I think it advisable to delay more elaborate schemes until the advent of the new Hospital, when we hope for suitable modern accommodation for all classes.

School girls of both missions are under my care.

I have charge of the Hospital for children at the R. C. Mission. The work done there is of great benefit to the community and its value apparent when one realizes the children of all classes received skilled nursing usually without remuneration and without reference to denomination. The children are either returned to their homes after treatment or remain indefinitely at the Mission according to circumstances. This is the nucleus of an infant welfare centre, which is very badly needed in this country.

The features of interest during the year were cases of Encephalitis Lethargica in both Schools in April and May, and an epidemic of Measles and Chicken-pox in the latter months of the year.

I have the honour to be,

SIR,

Your obedient servant,

ELIZABETH LE SUEUR.

Pathologist.

Death from Haemorrhagic Pancreatitis Simulating Murder.

The following case is quoted from a point of interest to the pathologist and to illustrate the necessity for adequate post-mortem facilities as an aid to Police work.

The body of a Chinaman (gardener) was found on a road 2 miles from Kuching. There was evidence that the body had been dragged a short distance. Deceased had blood stained abrasions on right temple and over malar regions, there was a bloody discharge from the nose.

Subsequent enquiries elicited that the man had spent the day previous in the bazaar, that he had complained of illness, and further was a heavy opium smoker. In the evening he started to walk to his house 3 miles from the bazaar. The body was found next morning and the Police informed. Murders among Chinese are not infrequent and occasionally the motive is a slight one. The Police Authorities immediately set to work to find "clues" and the identity of the murderer, while the body was sent to the mortuary for an autopsy.

Post-mortem Findings.

Fairly nourished man—old Colles fracture Right Wrist and old arthritis Right Knee.

Recent antemortem abrasions on left temple and over malar region. Nasal cartilages badly fractured, very little reaction. No other marks of violence on cadaver—Palpation of Thorax showed fractured ribs on both sides.

Scalp.—Previously mentioned abrasions right temple. No other injury.

Skull.—Nil abnormal.

Dura.—Injected—no haemorrhage.

Widespread subarachnoid haemorrhages of a petechial nature.

Brain tissue congested with venous dilatation. Cerebro-spinal fluid blood stained.

Mouth Larynx.—Nil abnormal.

Thorax.—Recent fracture of ribs R. 2, 3, 4 & 5 and L. 5 & 6, 1 inch from cortex external junction—no surrounding reaction—no haemorrhage.

Pleura.—Old organised adhesions over both lungs.

Left Lung.—Emphysema with few old calcified tubercles at apex.

Right Lung—Patch pneumonia (lobar) right base.

Pericardium contained about 2 oz. yellow clear fluid.

Heart.—Marked dilatation right side.

Muscle very marked degeneration and dilatation.

Aortic Valves.—Slight thickening—other valves showed nothing abnormal.

Aorta & Arteries.—Moderate arterio sclerosis.

Abdomen.—Slight distension.

Extensive retro peritoneal haemorrhage extending from diaphragm to pelvis—about 1 pint free blood stained fluid free in peritoneal cavity. Haemorrhage was most extensive in upper abdomen, a red jelly like mass covering kidneys and spleen and extending to floor of pelvis, most abundant in pancreatic mesenteric region. There was no ruptured viscus vessel. The fat of the mesentery and abdomen was necrotic.

Stomach.—Full of undigested rice.

Duodenum.—Occlusion of pancreatic duct subsequently described.

Jejunum.—contains pale yellow faecal material. *Ankylostomo duodenale.*

Ileum.—Meckels diverticulum present, 17 inches from caecum.

Appendix.—Full of concretions—no inflammation.

Caecum, Colon and Rectum.—Distended c. hard yellow faeces.

No haemorrhage or ulceration.

The Liver region was difficult to dissect owing to subperitoneal haemorrhage.

A large mass size of lemon was found to the left of the gall bladder. This proved to be in the pancreas, of which the ducts were enormously distended with large soft gall stones.

The pancreas was very necrosed and haemorrhagic with a large amount of fibrous tissue—Impossible to get an accurate weight.

The Gall Bladder, semi distended contained about oz. 2 pus and 14 small stones.

The pancreatic ducts were firmly packed with stones which were found right up the common bile duct and through the liver tissue.

Liver.—50 ozs. advanced fatty degeneration. Liver tissue very friable. Bile stained.

Veins congested. Stones throughout the small and large bile passages.

Despite the occlusion of the common duct there was very little bile in the gall bladder and intestines, though the liver tissue was bile-stained—one presumes the bile production functions of the liver were partly in abeyance.

Suprarenals.—Right, embedded in haemorrhagic mass, haemorrhages into substances of gland.

Left—lying in haemorrhagic—mass apparently normal.

Kidneys.—Right 6 ozs., large Intracapsular haemorrhages with marked friability of organ—partial destruction.

Left—4 ozs. Fatty Cortex atrophied.

Urine drawn off mainly blood. No evidence of Glycosuria.

Bladder.—Distended with 20 ozs., blood-stained urine—Prostate enlarged.

Spleen.—8 ozs., Perisplenic haemorrhages—Tissue soft and very haemorrhagic.

Death was due to haemorrhagic pancreatitis due to occlusion of pancreatic ducts with biliary calculi. The presence of the calculi must have been of long standing, judging by the distension and thickening of the ducts.

Special interest attached to the presence of enormous number of calculi throughout the bile ducts, and their comparative rarity in the gall bladder. The presence of such a large number of gall stones embedded in the pancreatic duct must be a very rare condition.

The literature at my disposal does not refer to the condition. The superficial injuries to the face and nose and fractured ribs were obviously due to the patient falling forwards in a collapsed condition.

It is not uncommon to find in opium smokers advanced pathological lesions without symptoms. In this case one wonders how the deceased was able to support himself as a gardener and to undertake a journey of six miles on foot.

Published in Transactions of Royal Society of Tropical Medicine and Hygiene.

8.—Lunatic Asylum.

Lunatic remaining in Asylum ending December 31st 1922	...	9
„ admitted during the year 1923	... ..	29
		<hr/> 38

Discharged.	Absconded.	Died.	Remaining.	Total.
2	...	2	34	38

Mortality per cent 5·40.

Nationality:—

Kheh	...	...	...	11
Teochew	...	...	...	4
Land Dyak	...	...	...	4
Sea Dyak	...	...	...	3
Hylam	...	...	...	4
Cantonese	...	...	...	5
Hokkian	...	...	...	2
Kowchew	...	...	...	1
Hockchew	...	...	...	1
Javanese	...	...	...	1
Tamil	...	...	...	1
Liewchew	...	...	...	1
				<hr/> 38

Lunatic Daily Average Sick:—

January	...	...	...	8·00
February	...	...	...	8·71
March	...	...	...	9·43
April	...	...	...	10·00
May	...	...	...	9·32
June	..	...	...	9·00
July	...	...	...	8·38
August	...	...	...	8·00
September	...	...	...	8·00
October	...	...	...	8·00
November	...	...	...	8·00
December	...	...	...	9·74

Table of Diseases:—

Dementia praecox	...	...	9
Delusional Insanity	...	...	4
Acute Mania	...	...	22
Melancholia	...	...	2
Circular Insanity	...	...	1
			<hr/> 38

Cause of Death:—

Exhaustion following acute mania	...	1
Dysentery	... ..	1

9.—The Sarawak Police.

Total number of cases treated during the year	...	1,208
„ „ attendance	... ..	4,017
Daily average sick	...	11
Recruits examined	... ..	37

Race.	Male.	Female.	Children.	Total.
Malays	676	35	31	742
Sikhs	203	20	1	224
Dyaks	100	15	1	116
Sepoys	74	2	2	78
Chinese	32	—	2	34
Javanese	10	—	—	10
European	4	—	—	4
Total	<hr/> 1,097	<hr/> 72	<hr/> 37	<hr/> 1,208

The diseases worthy of note occurred as follows:—

Ankylostomiasis	...	...	12
Beri-beri	...	...	3
Chicken-pox	...	...	1
Dengue	...	...	1
Dysentery amoebic	...	...	13
Filariasis	...	...	1
Gonorrhoea	...	...	1
Gonorrhoeal Synovitis	...	...	1
Influenza	...	...	80
Malaria (B. T.)	...	...	1
„ (S. T.)	...	...	8
Ascariasis	...	...	19
Tuberculosis, pulmonary	...	..	1
Yaws	...	...	24
Asthma	...	...	6
Bronchitis	...	...	22
Broncho Pneumonia	...	...	1
Pneumonia	...	...	1
Scabies	...	..	37
Acute Conjunctivitis	...	...	31
Keratitis	...	...	1
Pterygium	...	...	6
Lymphangitis	...	..	6

10.—Sarawak Rangers.

Total number of cases treated during the year	...	...	1,352
Average daily sick	...	...	8.14

Nationalities:—

Europeans	...	...	6
Eurasian	...	...	1
Indians	...	..	19
Malays	...	...	136
Dyaks	...	...	1,110
Philippinos	...	...	59
Javanese	...	...	17
Chinese	...	...	4
			1,352

Diseases worthy of note occurred as follows:—

Malaria	...	...	6
Filariasis	...	...	3
Measles	...	...	10
Mumps	...	...	1
Influenza	...	...	79
Phthisis	...	...	1
Dysentery (amoebic)	...	...	2
Hookworm	...	...	3
Gonorrhoea	...	...	2
Bubo	...	...	1
Typhoid fever	...	...	1
Yaws	...	...	21
Scabies	...	...	68
Acute Conjunctivitis	...	...	98
Asthma	...	...	6
Bronchitis	...	...	20

11.—Sarawak Jail.

Total number of patients treated during the year	...	577
--	-----	-----

Discharged cured.	Sentence expired.	Died.	Remaining.	Total.
563	2	5	7	577

Nationalities:—

Kheb	...	...	176
Hylam	...	...	21
Teochiew	...	...	40
Liewchiew	...	...	22
Hokkien	...	...	79
Cantonese	...	...	11
Heng Wah	...	...	1
Foochow	...	...	3
Sea Dyak	...	...	57
Land Dyak	...	...	25
Tamil	...	...	10
Indian	...	...	9
Javanese	...	...	12
Sikh	...	...	21
Melanoë	...	...	3
Banjar	...	...	1
Malay	...	...	76

577

Causes of death :—

Phthisis	...	...	...	1
Dysentery	...	...	...	4

There was no judicial execution during the year.

The Diseases worthy of note occurred as follows :—

Influenza	...	...	...	4
Gonorrhoea and its complications	...	...	...	10
Rheumatism	...	...	...	9
Malaria S. T.	...	...	...	1
Dysentery	...	...	...	12
Asthma	...	...	...	2
Bronchitis	...	...	...	9
Phthisis	...	...	...	1
Scabies	...	...	...	3
Kurap	...	...	...	5
Syphilitic Ulcer ..	...	...	...	1
Fracture of humerus	...	...	...	1
Acute Conjunctivitis	...	...	...	9

12.—Outpatient Department.

Total number of cases treated during the year	...	5,111
Daily average sick	...	30
Recruits examined Sarawak Rangers	...	51
„ „ Fire Brigade	...	6
„ „ Prison Warders	...	4

<i>Nationality :—</i> Burgher	...	...	13
Chinese	...	...	878
Dyaks	...	...	828
Eurasians	...	...	86
Europeans	...	...	250
Indian	...	...	54
Japanese	...	...	2
Jew	...	...	1
Malay	...	...	2,250
Melano	...	...	11
Philippino	...	...	8
Tamil	...	...	730
			<u>5,111</u>

TABLE SHOWING THE NUMBER OF PATIENTS FROM EACH DEPARTMENT
AND OUTSTATIONS DURING THE YEAR 1923.

Astana and Astana Farm	...	46	Naval	...	73
Brooke Dock	...	12	Audit Office	...	15
Charity account	...	1,056	Chief Secretary's Office	...	11
Charity Kampong Gresik School	...	2	Exemption Tax	...	7
„ „ Jawa School	...	98	Forest Department	...	79
„ „ Govt. Lay School	...	81	Resident's Office	...	49
„ „ R. C. School	...	19	Municipal Office	...	122
„ „ St. Mary's School	...	25	Post and Customs Office	...	88
„ „ St. Thomas's School	...	107	Printing Office	...	128
„ „ R. C. Convent	...	12	Registration	...	55
Sarawak Club	...	1	Treasury Office	...	65
Court Datu	...	52	Weight and Measure	...	2
„ Police	...	28	Outstations	...	65
„ Debts	...	3	Prison	...	50
„ District I	...	23	Private and Cash accounts	...	123
„ „ II	...	35	Public Health Office	...	3
Electric Department	...	62	Public Works Department	...	1,284
Matang Estate	...	2	Rest House	...	1
Fort Department	...	58	Railway	...	91
Land and Survey Department	...	492	Roads	...	30
Medical Department	...	126	Store	...	13
R. C. Mission	...	31	Telephone and Wireless	...	124
S. P. G. Mission	...	79	Government Wharf	...	1
Museum	...	23	Government Workshop	...	110
			Water Works	...	99
			Total	...	<u>5,111</u>

OUTPATIENT DEPARTMENT.

Number of Outpatients treated during the year 5,111.

13.—Pauper Hospital.

Paupers remaining in P. Hospital year ending December 31st, 1922 ...	79
Paupers admitted during the year 1923 ...	52
	<u>131</u>

Transferred to G. H.	Absconded.	Died.	Remaining.	Total.
13	15	21	82	131

Mortality per cent 16.03.

Nationality:—Hylam	...	...	...	13
Cantonese	...	...	...	11
Liewchew	...	...	...	14
Teochiew	...	...	...	27
Hokkien	...	...	...	12
Kheh	...	...	...	43
Henghua	...	...	...	1
Kowchiew	...	...	...	8
Javanese	...	...	...	1
Hokchia	...	...	...	1
				<u>131</u>

PAUPER DAILY AVERAGE NUMBER OF INMATES.

January	...	...	...	83.51
February	...	...	...	85.78
March	...	...	...	84.32
April	...	...	...	85.33
May	...	...	...	87.35
June	...	...	...	91.36
July	...	...	...	89.25
August	...	...	...	85.96
September	...	...	...	83.66
October	...	...	...	80.32
November	...	...	...	80.35
December	...	...	...	81.00

14.—Satang Island.

Towards the middle of the year, Malaria broke out in epidemic form among the Chinese and Malay workmen employed in the construction of the Leper Camp. Numerous cases were reported and the Medical Department was instructed to carry out investigations. A preliminary blood examination was made of all the employees, mostly Malays, and their families who had voluntarily returned to Kuching. Malignant tertian parasites were found in 77% of the films and a high spleen index was demonstrated.

Five cases died from cerebral symptoms.

On my first visit early in August, I was accompanied by the Government Pathologist.

It was found that considerable clearing and felling of the jungle had taken place. The island hillside is precipitous. Steep ravines scour their way down to the sandy beach.

A search was made for possible breeding places. Artificial collection of water revealed larvae of *Culex fatigans* and *Stegomyia fasciata*. Anophelinae larvae were found in the seepages alongside the main flume and in the trickles from some of the watercourses.

Adult *A. maculatus* were caught. It was discovered that they were the only species of anophelines on the island.

Anti Malarial Measures.

- (1) Each workman was issued with a mosquito net.
- (2) Quinine prophylaxis was adopted.
- (3) The breeding places were obliterated.
- (4) The ravines were cleared and subsoil combined with surface drainage introduced.
- (5) A natural spring flows in the largest ravine where the greatest number of anopheline larvae were found. The Public Works Departments had commenced to build here a circular dam for the drinking and bathing water supply. This work was not interrupted and later results justified non-interference.

Three months later a further review was made. The health of the coolies had improved. The pathological report showed that the number of films with parasites had decreased to 26% of the resident population the spleen index remained relatively high,—86% among the Malays and 20% Chinese. The situation at the close of the year showed still further improvement. In one case only were parasites and a slightly enlarged spleen demonstrable. For all practical purposes the island can now be declared malaria free and it should be ready for the reception of the Lepers early in 1924.

15.—Far Eastern Association of Tropical Medicine.

The Medical Congress was held in Singapore in September. Dr. Le Sueur and I were the official delegates for Sarawak. The commencement of the Congress was devoted to the reading and discussion of various papers which were contributed by some of the members. Consequent to this a tour was arranged. The itinerary included trips to Singapore and its environs, Kuala Lumpur, Ipoh and Penang.

The programme consisted of a series of visits to the leading Medical, Health and Research Institutions. A wealth of educative material was placed at our disposal, yet in retrospect, one feels that a feature of outstanding interest was the clear insight we obtained into the vast anti-malarial schemes which these countries have prosecuted to such a successful issue.

A General Meeting was held in Singapore to discuss the control of Beri Beri in the East. In brief the resolutions passed were :—

- (1) International action and control were for the time being impracticable.
- (2) Over-milled Rice is the causative agent.
- (3) Individual Governments should try educational methods and pay attention to the improvement in diet for the general population with regard to the too exclusive use of overmilled Rice.

We are much indebted to the Straits and Federated Malay States Governments for the excellence of our entertainment and reception and to the various Medical Officers for their great assistance.

16.—Education.

The curriculum of daily lectures comprises Physiology, Anatomy, Materia Medica, Pathology, Medicine and Surgery and Ward Cliniques. In addition the dressers attend and in some cases conduct post-mortems. A few bodies were prepared and dissections taught. This branch of study has not produced the fruitful results that were at one time expected. It has however had the advantage of demonstrating the main anatomical relationship; with emphasis laid on the importance of a thorough knowledge of this subject, the dressers will I trust evince a more intense interest.

In rotation the dressers are attached for short periods to the Pathological Department and the Dispensary. The juniors respond more readily to training, though not many of them show much aptitude for Laboratory methods.

The annual examination was held in the middle of the year. The results were most satisfactory. Two passes being recorded with first class honours. The general standard of information appeared to be well above the average.

A proposal was put to the S. P. G. and R. C. Mission Schools for Medical tuition of a certain number of selected boys of the senior standards. The intention being to give them an elementary training before they were engaged by the Medical Department. Both Schools were agreeable to this scheme. We are now waiting for the students to come forward.

Dresserships in the Outstations are still limited, as far as possible, to a period not exceeding six months, after which they are returned to Kuching for further training. The senior men are occasionally permitted to extend this period to a year. Exceptions are occasionally made to this rule in the 3rd Division where the General Hospital at Sibu now affords considerable scope for experience and learning.

17. Outstations.

A. 1st DIVISION.

Sadong.—During the year 227 patients were admitted to the local hospital for treatment. Of these six were sent to the General Hospital Kuching, seven died and eleven remained in hospital at the end of the year.

The details of Nationality are as follows :—

Chinese.	Tamils.	Malays.	Dyaks.	Total.
203	21	6	8	227

The seven fatalities were due to :—

1.	Heart Failure	...	...	3
2.	Mine Accidents	...	...	3
3.	Chronic Dysentery	...	...	1

252 cases of Yaws received injections of Novarsenobillon.

Dr. Le Sueur is to be congratulated on her energetic campaign against Ankylostomiasis among the miners. Mass treatment and the improvement in sanitation have produced the excellent results which are enumerated in the Pathological Report.

B. 2nd DIVISION.

Simanggang.—During the year 111 in patients were treated at the local hospital. Of these 5 were sent to Kuching for treatment, 1 absconded, 2 died, 32 remained in hospital at the end of the year.

Details of Nationalities :—

Chinese.	Malays.	Sea Dyaks.	Total.
47	24	40	111

The number of out-patients treated amounted to 2,105, their nationality being :—

European.	Chinese.	Malay.	Dyak.	Kayan.	Total.
24	519	460	1,100	2	2,105

Of these, it is noted that yaws accounted for 480.

C. 3rd DIVISION.

Sibu.—I am indebted to Dr. Reed, D. M. O. 3rd Division for a report on the 3rd Division for 1923, which I append herewith.

ANNUAL REPORT FOR THE YEAR 1923 OF THE SARAWAK GOVERNMENT
MEDICAL DEPARTMENT IN THE 3RD DIVISION OF SARAWAK.

Staff

Department Buildings at Sibu

General Health of Sibu

General Remarks on the Department at Sibu

Outstations

Development on the Department in the 3rd Division

Financial Statement

Inpatients, Government Hospital Sibu

Outpatients, 3rd Division

N. A. B. Injections

Pathological Examinations

Conclusion

Staff.

At the end of the year 1923 the Staff in Sibu consisted of the Divisional Medical Officer, Dr. Reed, Mr. N. N. Nair, L. M. P., Calcutta, previously Sub-Assistant Surgeon in the Indian Subordinate Medical Department, who arrived on October 31st and joined on the Grade of a First Grade Dresser of the third year, two apprentice Dressers, a Clerk and a *tukang ayer* who performs the duties of Chinese Interpreter and "odd job man". There was also one prisoner *tukany ayer*. In addition there was one Dresser at Mukah and another at Bintulu.

It is hoped that this Staff will be considerably increased, as I think it will be seen that it is not sufficient to cope with the Medical needs of the 3rd Division. In Sibu alone, during 1923, there were nearly 200 admissions to the Hospital and over 3,000 Outpatients.

More Dressers are required and a man with special training in Dispensing and another with training in Pathological work would be much appreciated. Their duties would not yet be solely confined to these subjects.

The difficulty of languages too, is a real one. Few Dressers speak Foochow and few Foochows speak any other language. A Dresser who can speak Dyak is also essential.

The previous Divisional Medical Officer, Dr. Marjoribanks was appointed to Kuching and left Sibu on May 26th. Assistant Surgeon Chand arrived on May 30th. Later Dr. Reed was appointed Divisional Medical Officer, arrived on July 20th, and left again for Kuching on August 10th finally returning to Sibu on October 24th.

Department Buildings at Sibu.

The New Hospital buildings were completed after being slightly altered and they have since been occupied. A new building containing two houses for Dressers has also been built. These buildings are much superior to the old ones in space and planning and will greatly assist the development of the Department, but the Hospital has not been well built, the finish being especially poor. The four small rooms to be used as Waiting Room, Office, Dispensing and Theatre, are also on the small side.

The following further buildings are required. (1) A small house for Senior Dresser or Assistant Surgeon near the Hospital. (2) Coolies' Quarters. (3) A Post-mortem room. (4) Temporary accommodation for lepers whilst awaiting passage to Kuching. These lepers are sometimes a considerable nuisance.

There are many Milanau graves near the Hospital, but it is believed that the difficulty caused by these can be removed, when they will be quite sufficient room for the necessary buildings on the Hospital Tanjong. The ground has not yet been cleared but it appears to be good. It is hoped shortly to build a small *pengkalan*.

General Health of Sibu.

The health of the Europeans has been good and calls for no comment. There was one European birth in Sibu.

The General Health of Sibu during the year appears to have been good with the exception and Phthisis and Venereal Disease, which also appear to provide the Chief Public Health problems in neighbouring communities much larger and more completely organised than our own. For Phthisis little can be done while the present Bazaar conditions and mode of living are prevalent. In some of the few individual cases who have attended regularly, injections of Sodium Morrhuate, have been of value. The problem of Venereal Disease is being attacked. As far as possible the measures recommended in Singapore are being followed on a very miniature scale with, it is hoped, successful results.

The completion of the Waterworks and the cementing of the Bazaar drains will have a beneficial effect on the health of the Bazaar.

Little is known of the health of the Malays and other natives apart from the Bazaar but there do not appear to be any particularly prevalent diseases of importance.

General Remarks on the Department in Sibu.

The whole system of book-keeping, the filing of Correspondence and Prescriptions and the Registration of Attendances and Admissions to the Hospital has been or is being systematised and re-organised.

The Auditor's recommendations for the keeping of accounts are being carried out.

Suitable equipment such as blankets, clothing, pillows and mattresses etc. has been obtained for the patients in the Hospital.

The system of Dispensing and storing of drugs is receiving attention.

Sufficient material for simple examinations of blood, urine, faeces sputum, pus etc. has been obtained and an Index of Examinations is kept and a Monthly Report furnished. The figures will show how necessary this was, though there is not time to make as many examinations as one could wish

Conditions still prevent the performance of any considerable amount of major Surgery. A number of minor operations have been performed. Post-mortem Examinations are few and are chiefly cases of a medicolegal nature.

There is as yet practically no Obstetrical work.

At present, when one admits a patient to the Hospital, one frequently has to admit most of his or her family as well. Possibly this difficulty might be to some extent overcome, in the case of women at any rate, by having a female Attendant or Nurse who, if suitable, might also assist the native Midwives and in that way help to introduce Western ideas. However I have not yet fully investigated the possibilities in this direction.

The present system of examination of steamers from Singapore is almost useless, as the majority of the passengers leave the vessel on her way up river. Various recommendations concerning the examination of vessels at Rejang have been made in the past, but it has not been possible to come to any suitable arrangement. It is expected that the new Merchant Shipping Order will remove this difficulty.

A considerable number of vaccinations has been done both in Sibn and the Outstations, but of course they represent but a small proportion of the births.

Outstations.

The Dressers at Mukah and Bintulu are doing good work and extracts from their Annual Reports are appended.

The Catholic Fathers are of much assistance in distributing medicines and in vaccinating. They also bring inpatients for treatment and help to distribute Western ideas. The Methodist Mission also helps in a similar way in the Sibn District. Many of the Officers-in-Charge and the Court Writers also take an interest in medical work and are of assistance. I hope shortly to be able to standardise the drugs issued to Outstations and to supply Instructions.

More Dressers are really required in the Outstations both to treat patients and to send suitable cases to Sibn, but it is realised that too much cannot be expected at once. The following places may be mentioned as requiring them; Rejang, Kapit and Kanowit, Binatang and Sarikei.

Leprosy continues to be a serious problem amongst the Dyaks and quite a number of infected Chinese have been met with. At present only those cases which are considered to be a danger to a large community can be sent to Kuching. When the Satang Camp is ready it will be possible to collect large numbers from the Division. It is difficult to persuade some of the patients to go to Kuching and it seems that some more stringent Regulations are required.

Yaws is mentioned elsewhere.

Malaria and Amoebic Dysentery appear to be fairly widely distributed but not very prevalent.

Both at Mukah and Bintulu a small separate building is badly required for the Department. This could be divided into a Dispensary and Outpatient Department and provision could also be made for a few Inpatients. The building at Baram is very suitably planned. Quarters for the Dresser should be close at hand.

The Dresser at Mukah has paid monthly visits to Oya and Dalat but has not found the natives there very willing for treatment. My experience has been the same. In November there was an epidemic of Influenza at the Catholic Mission at Mukah and on the Tellian river. There were no fatalities. The Dresser at Mukah reports seven cases of snake bite of which two were fatal.

One death occurred at Bintulu. The case appears to have been one of Acute Mania complicated by starvation. There were no epidemics.

Development of the Department in the 3rd Division.

With regard to the development of the Medical Department, the 3rd Division cannot be regarded as a single entity. Sibn and the surrounding cultivated land present one problem, the Outstations and indigenous natives, another.

Sibn.

The Foochow Colony of Sibn and the neighbouring district probably offers a different proposition from any other group of people in the country. The Foochow Chinese are really much more connected with Singapore and China than with Sarawak Proper. They are more used to European teaching and they are certainly more willing for Western medicine than the average Sarawak Chinese and I feel sure that the next few years will show steadily progressive results in Medicine, provided that facilities for expansion are provided as occasion arises.

The continued presence of an European Medical Officer is absolutely essential. I think progress has been retarded by the fact that the Department for some time past, has not always been fortunate in its Subordinate Staff. It is not yet possible to estimate progress numerically as figures in the past have not been complete.

The other native inhabitants of Sibn do not show any conspicuously increasing desire for treatment and work amongst them has, in the main, been confined to Government Servants. I have however always found them very appreciative when anything is done for them.

Outstations.

About this side of the work I can say but little, since during my short time at the Station the completion and furnishing of the New Hospital and other circumstances have prevented my travelling much. I have only visited Dalat, Oya and Mukah where I found little work amongst the natives. Of course the Outstations can never be completely medically controlled. Circumstances prohibit this; but during the coming year I hope to visit all places of importance and to make a Medical Survey of the Division, however incomplete, partly with a view to finding out whether, as I think very likely is the case there is any localisation of certain diseases in definite districts. I think this will apply especially to Yaws, Malaria,

Helminthiasis and possible Leprosy. If such prove to be the case it will greatly help in reducing the incidence of these diseases. Such a survey would be greatly facilitated if there were a well equipped Medical Department launch.

A word must be said about Yaws which is the one disease which brings Dyaks and other natives in contact with Western Medicine. The figures will show how steadily this contact is increasing. I think that the existence of Yaws may prove to be an actual assistance to the native in this way. He has made up his mind that there is one thing that will cure Yaws, and that is "N. A. B." and he will put himself out considerably to get it. This is more than can be said about any other kind of native as a class with regard to any other form of medicine. Of course the fact that the numbers of injections are increasing might be due either to an increase in the incidence of the disease or to an increased willingness for treatment, but, considering all the circumstances I feel that there is little doubt that the latter is the case.

The Registration of Births and Deaths Order should be of great assistance to the Department especially with regard to Outstations, but it is difficult to understand why no space has been made for the "Cause of Death". However roughly this was indicated it would be very useful to a Medical Officer if he could make such a reference when visiting Outstations.

FINANCIAL STATEMENT FOR THE MEDICAL DEPARTMENT IN THE 3RD DIVISION.
For 1923.

Sibu.

<i>To</i>	<i>Debit.</i>	<i>By</i>	<i>Credit.</i>
Pay, Allowances etc ...	\$6,808.47	Medicine sold incl: N. A. B. ...	\$2,495.60
Drugs received etc ...	1,386.55	Health Certificates ...	274.00
Various ...	1,805.29	Hospital Fees etc ...	365.30
		Drugs supplied on Govt. a/c*	2,008.90 ⁴
		Balance ...	4,856.51
	<u>\$10,000.31</u>		<u>\$10,000.31²</u>

Mukah.

<i>To</i>	<i>Debit.</i>	<i>By</i>	<i>Credit.</i>
Expenditure ...	\$1,455.16	Medicine sold ...	\$660.63 ⁵
		Drugs supplied on Govt. a/c ...	510.55
		Balance ...	283.98
	<u>\$1,455.16</u>		<u>\$1,455.16⁶</u>

Bintulu.

<i>To</i>	<i>Debit.</i>	<i>By</i>	<i>Credit.</i>
Expenditure ...	\$1,752.22	Medicine sold ...	\$768.06
		Drugs supplied on Govt. a/c ...	215.90
		Balance ...	768.26
	<u>\$1,752.22</u>		<u>\$1,752.22</u>

SUMMARY FOR 3RD DIVISION.

<i>To</i>	<i>Debit.</i>	<i>By</i>	<i>Credit.</i>
Sibu ...	\$10,000.31	Sibu ...	\$5,143.80
Mukah ...	1,455.16	Mukah ...	1,171.18
Bintulu ...	1,752.22	Bintulu ...	983.96
		Balance ...	5,908.75 ³
	<u>\$13,207.69</u>		<u>\$13,207.69</u>

*Excluding indents supplied to Mukah and Bintulu.

¹ 1922.	¹ 1921.	² 1922.	³ 1922.	⁴ 1922.	⁵ 1922.	⁶ 1923.
859.00	78.50	3,951.56	3,612.31	1,221.02	264.55	9,331.08

These figures have been made out as accurately as possible with the material at my disposal, but the system of accounts has only recently been reorganised by the Auditor and it is not possible to make accurate comparisons with previous years. The figure \$1,386.55 for Drugs received etc. for Sibu does not represent the true amount as the Treasury have not yet received notice of the value of all Drugs received from Kuching.

INPATIENTS GOVERNMENT HOSPITAL SIBU 1923.

These total 195.

Monthly Admission.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Rem. fr. 1922.	TOTAL.
6	7	11	17	21	11	17	25	15	21	18	21	5	195

These include.,

Dysentery	...	...	...	30 cases
Malaria	...	...	...	11 "
Nephritis	...	...	...	3 "

There were 16 deaths in the Hospital during the year as follows :—

Dysentery	...	...	...	...	3
Malaria	...	...	...	...	2
Phthisis	...	...	...	...	2
Septic wounds	...	...	...	...	2
Typhoid	...	...	...	...	1
Convulsions (?) Encephalitis lethargica	...	...	...	...	1
(?) Ruptured aneurism	...	...	...	...	1
Panophthalmitis, old age and debility	...	...	...	...	1
Opium poisoning	...	...	...	...	1
Tuberculous abscess of Hip	...	...	...	...	1
(?) Endocarditis	...	...	...	...	1
					16

Of the 195 cases, apart from the Monthly Reports I can find partial records of 134 cases, The nationalities of these and the accounts under which they are entered are as follows :—

Chinese	...	...	40%	P. W. D. Account	...	30%
Tamils	...	...	31%	Private	...	26%
Dyaks	...	...	19%	Prison	...	22%
Milanaus	...	...	5%	Govt. Charity	...	16%
Malays	...	...	3%	Police	...	2%
Indians etc	...	...	1%	R. C. Mission	...	1%
				Treasury	...	1%
				S. S. Co.	...	1%
				Kapit	...	1%

Most of the Tamil coolies have now returned to Kuching. Many of them were cases of a trivial nature.

OUTPATIENTS 3RD DIVISION 1923.

The total number is 4,737.

SIBU.	MUKAH.	BINTULU.
Chinese ... 85%	Milanaus ... 38%	Dyaks (various) ... 58%
Tamils ... 19%	Dyaks ... 24%	Malays ... 22%
Malays ... 18%	Malays ... 17%	Chinese ... 14%
Dyaks ... 17%	Chinese ... 14%	Europeans ... 2%
Europeans ... 4%	Javanese ... 3%	Tamils ... 1%
Indians etc ... 6%	Europeans ... 2%	Eurasians ... 1%
Milanaus ... 2%		Sepoys ... 1%
Total number ... 3,174	... 913	... 650
Grand Total ... 4,737		

It is not always certain whether these figures refer to Attendances or to actual number or Patients, though the latter is intended. Consequently comparisons are difficult; a new system of Registration has been adopted for Sibü in the coming year which will obviate this difficulty.

It is not possible to produce an accurate Table of Diseases but the following are worthy of note. Yaws, Phthisis, Gonorrhoea, Syphilis, Dysentery, Asthma. Haemorrhoids are very prevalent and Dyspepsia common. Malaria is comparatively rare in the Sibü District. Tinea and Skin Diseases of all kinds are common. Tinea Imbricata especially common amongst the Dyaks, as is Leprosy in certain districts.

N. A. B. INJECTIONS IN THE 3RD DIVISION.

Sibü	...	380 (1922. 173, Feb. 1924. 170)
Mukah	...	158 (not given continuously throughout the year)
Bintulu	...	262
Total	...	790

The great majority of these were for Yaws and in almost all cases it was only possible to give one injection to each patient. I do not think that the Sibü figures are complete. The number of injections is rapidly increasing.

PATHOLOGICAL EXAMINATIONS AT SIBU FOR 1923. (from October 25th.)

Total number of Examinations 201.

Faeces 57 Examinations :—

Ova of Hookworms found in	...	...	7 patients
„ <i>Asc. lum.</i>	...	...	13 „
„ <i>T. dis.</i>	...	...	8 „
„ <i>Oxyuris verm.</i>	...	...	1 „
Embryos of <i>Strongyloides sterc.</i>	...	...	1 „
<i>Entamoeba hist</i>	...	...	6 „

Urine 49 Examinations :—

Albumen found in 4 Patients, Casts in 5 and Pus in 2.

Blood 20 Examinations :—

Malarial parasites found in 4 Patients.

Sputum 16 Examinations :—

Tubercle bacilli found in 4 Patients.

Urethral, Cervical, Vaginal, Prostatic smears examined from 23 Patients. Gonococci found in 6 Patients.

B. leprae smears examined from two patients, one positive.
One Cerebrospinal fluid examined and found normal.

These figures do not truly represent the incidence of the various infections as there is not time to do the number of examinations that one would like and cases have to be selected. The figures simply serve to indicate a beginning.

It is however remarkable that Ankylostomiasis is not nearly so prevalent as in the Kuching district. I have not seen a single severe case. Ascariasis on the other hand, is very common.

A few tumours and other specimens have been sent to Kuching for examination.

Conclusion.

Figures are not yet complete and the Department in the 3rd Division is in too young a stage for one to be justified in coming to any certain conclusions, but I feel that progress if slow is sure and the opportunities are great. I see no reason why the town and district of Sibü should not in a few years time be satisfactorily medically controlled and the major portion of the Division be at least under partial supervision.

I will mention again the following necessities for the future.

Increase of Staff in Sibü and Outstations, with the provision of at least one fully trained man at Sibü to supervise the work when the Divisional Medical Officer is away in the Division, or elsewhere; also the provision of Dressers especially trained in various subjects.

Increase of accommodation in Sibü and Outstations. Provision of a fully equipped sea-going Medical Department launch.

Finally I should like to express my thanks to the Resident of the 3rd Division, Mr. D. A. Owen, for his ready advice, assistance and co-operation without which the development of the Department would be impossible and I should like to thank all those of every nationality who have helped to make things easy when they might have been difficult.

J. G. REED, M. R. C. S., L. R. C. P.,
Divisional Medical Officer,
3rd Division, Sarawak.

D.—4th DIVISION.

Miri.—To Dr. Foster-Smith, Senior Medical Officer of the Sarawak Oilfields Ltd., I am indebted for the following details.

In August 1923 a Government Dresser was posted to work in Miri and it will be seen that from that date there was a decline in the number of out-patients who were attended by the Medical Officer personally.

Malaria was the disease chief responsible for admissions to hospital and a number of Sarawak Rangers who were doing duty at Lutong were off duty with this disease, especially during October.

A number of European Government servants and their relations were treated during the year but there were not many cases of importance.

A lady, European, wife of Government servant, was in hospital for some time with Malaria and Chronic Rheumatism and was eventually sent to Singapore.

A Summary of the Annual Report of the Sarawak Oilfields Limited is also sent herewith together with Statistics of deaths, attendances at Hospital etc.

Annual Return of Government Out-Patients treated during the Year 1923.

DISEASES.	JAN.	FEB.	MAR.	APL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.
Wounds, Injuries and Surgical Conditions ..	20	16	51	30	34	18	19	9	2	1	3	2	205
Fevers ..	15	9	8	6	16	7	6	2	..	2	7	..	78
Diarrhoea and Dysentery ..	3	3	2	4	3	4	1	..	..	..	1	..	21
Beri Beri ..	1	..	..	..	..	..	1	..	..	..	..	..	2
Other Medical Conditions ..	27	16	25	18	27	28	7	4	5	6	7	6	176
Total ..	66	44	86	58	80	57	34	15	7	9	18	8	482
Admissions to Hospital ..	14	7	4	12	11	9	7	4	7	12	11	3	101

Classification by Races.

NATIONALITIES.	JAN.	FEB.	MAR.	APL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.
Chinese ..	33	19	50	12	16	14	8	4	1	2	1	1	161
Malays & Javanese ..	31	17	13	19	33	25	13	7	1	1	5	1	166
Dyaks ..	2	1	5	27	29	16	11	4	5	5	10	6	121
Other Asiatics ..	..	7	18	..	2	2	2	..	..	1	2	..	34
Total ..	66	44	86	58	80	57	34	15	7	9	18	8	482

Annual Return of Government Patients Admitted to Hospital during the Year 1923.

DISEASES.	JAN.	FEB.	MAR.	APL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.
Wounds, Injuries and Surgical Conditions ..	2	..	..	2	3	4	6	3	1	1	..	2	24
Malaria & Fevers ..	7	5	3	2	4	3	..	1	4	10	7	1	47
Diarrhoea and Dysentery ..	1	1	1	8	1	..	..	..	..	..	..	..	7
Beri Beri ..	3	..	..	2	..	..	1	..	..	..	..	..	6
Other Medical Conditions ..	1	1	..	3	3	2	..	..	2	1	4	..	17
Total ..	14	7	4	12	11	9	7	4	7	12	11	3	101

Classification by Races.

NATIONALITIES.	JAN.	FEB.	MAR.	APL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.
Chinese	8	3	2	10	8	5	7	..	2	2	3	..	50
Malays & Javanese	4	3	1	..	1	4	..	1	1	..	2	..	17
Dyaks	2	..	..	..	..	..	..	2	4	9	6	3	26
Other Asiatics .. ..	..	1	1	2	2	..	..	1	..	1	..	..	8
Total ..	14	7	4	12	11	9	7	4	7	12	11	3	101

Table of Government In-Patients for the Year 1923.

	CHINESE.	MALAYS & JAVANESE.	DYAKS.	OTHERS.	TOTAL.
Remained in Hospital on 31. 12. 1922 ...	5	2	2	—	9
Admitted during 1923	50	17	26	8	101
Remaining in Hospital on 31. 12. 1923	—	—	—	—	—

DISEASES.

Wounds, Injuries and Surgical Conditions ...	24
Malaria and Fevers ...	47
Diarrhoea and Dysentery ...	7
Beri Beri ...	6
Other Medical Conditions ...	17
Total	101

Daily Average of In-Patients ... 4

N. A. B. etc.—INJECTIONS GIVEN TO ALL PATIENTS DURING THE YEAR 1923.

		N. A. B.—Neokharsivan.		Total.
Syphilis	...	74	5	79
Yaws	...	57	1	58
Malaria	...	6	—	6
Other Conditions		26	—	26
		Total		169

SUMMARY OF ANNUAL MEDICAL REPORT FOR 1923.

General Health.

EUROPEAN STAFF.

One death occurred during the year, Mr. D. G. Balfour dying in October of Diabetes and Malaria.

There were 560 working days lost by sickness this year compared with 551 in 1922, but the average per employee was less at 4·2 compared with 4·7.

Malaria was responsible for the loss of 208 working days and 42 Europeans suffered from this disease.

Dysentery was the disease second in importance, 16 Europeans being off duty for 63 days from this cause.

Three employees were repatriated during the year.

WIVES AND FAMILIES.

There were no deaths in this section.

One lady who suffered from Pneumonia and Tuberculosis required repatriation.

Five confinements took place in the year and five children were born (one still born).

HEALTH OF COOLIES.

Attendances of out-patients numbered 33,000 in 1923 against 41,000 in 1922, this decline being due to more careful elimination of unfit coolies by repatriation and to earlier admission to hospital.

Admissions to hospital numbered 2,386 compared with 2,035. This increase was also due to the admission of a number of cases for repatriation and a number of early cases discovered at periodical examinations.

Deaths in Hospitals numbered 36 against 49 in 1922 and 55 in 1921, the mortality rate per cent of admissions declined to 1·5 from 2·4.

Deaths outside hospital numbered only 18 against 19 in 1922, and of these 11 were from bullet wounds received in the riot in July.

Malaria was responsible for slightly less than half the mortality and for slightly more than half the admissions to hospital.

The disease next in importance was Beri Beri, of which there were 100 cases admitted to hospital and many others of less severity. This disease is entirely due to the Chinese coolies' preference for a polished rice diet. With some difficulty a return to a mixed rice ration was made in October with a rapid drop in the number of cases.

Seventy-nine operations were performed during the year.

HOSPITAL BUILDINGS.

A new administrative block was completed by the end of the year, giving accommodation for dispensary, out-patients, store rooms and consulting rooms and releasing space in the old building sufficient for 30 more beds.

OUTSTATIONS.

Lutong.

There has been a considerable improvement in condition at this area during the year, and, although the usual autumnal malarial outbreak occurred, it was not so severe as in 1922.

Pujut.

There was an outbreak of Malaria in June and July, severe but fortunately of short duration.

Bakong and Buri.

Conditions quite satisfactory.

Meteorological Report.

The Annual Rainfall was 14% below the average, the deficiency being especially marked during the last 3 months.

Baram.

Number of patients admitted into Hospital during the year	...	...	87
Number of out-patients treated during the year	1,275

Total number of cases treated during the year	1,362
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Number of patients remained in hospital at the end of the year	...	1
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Nationalities:—

European.	Malay.	Chinese.	Tamil.	Sikh.	Dyaks.	Various	Total.
24	325	221	7	1	784		1,362

Of these 325 cases received injections of Novarsenobillon for Yaws and Muli.

One death occurred in hospital due to Intestinal Obstruction.

Only 92 children were recorded who had been successfully vaccinated.

Extension of Hospital.—The erection of a Dressing Room adjoining the Dispensary was completed in the middle of May.

E.—5th Division.

Limbang.—Limbang Dispensary opened on the 6th March 1924.

Total number of out-patients treated from 6th March to 31st December 803.

Nationality:—Chinese	...	...	...	151
Malays	...	...	...	356
Dyaks	...	...	...	152
Bisayah	..	...	...	46
Murut	...	...	...	24
Javanese	...	...	...	2
European	...	...	...	20
Indian	...	...	...	30
Kadayan	...	...	...	18
Tagal	...	...	...	3
Banjar	...	...	...	1
				803

There were no in-patients.

13 Cases of Yaws received injections of Novarsenobillon.

The Resident of the 5th Division reports that the disease is on the increase among upriver natives. The dresser finds that he is not able to leave headquarters. Parallel conditions are found in many of the outstations; to solve this difficulty a selected dresser will be deputed on a round of annual visits.

18.—Financial Statement.

I append herewith a general statement of the Expenditure and Revenue of the Medical Department for the year 1923.

MEDICAL DEPARTMENT.

Revenue and Expenditure 1923.

EXPENDITURE.				REVENUE.			

E. M. MARJORIBANKS,
Principal Medical Officer,
Sarawak.

